WHAT IS CLAIMED IS:

1. A color image pickup device comprising:

a pixel group placed in an array of a plurality of pixels of photoelectric conversion elements; and

a color coding array corresponding to the pixel group, arranged in a randomized array.

2. The color image pickup device according to claim 1, wherein said color coding array comprises a color filter.

3. A color image pickup apparatus comprising:

a color image pickup device having a pixel group placed in an array of a plurality of pixels of photoelectric conversion elements and a color coding array corresponding to the pixel group, arranged in a randomized array; and

color separation means for performing color separation processing of output signals of the color image pickup device in accordance with the random color coding array of the color image pickup device.

4. The color image pickup apparatus according to claim 3, wherein said color coding array comprises a color filter.

5.   The color image pickup apparatus according to claim
3 further comprising storage means for storing array data
concerning the random color coding array of said color image
pickup device, for performing color separation processing
at said color separation means.

6.   The color image pickup apparatus according to claim
5, wherein said storage means comprises mask ROM.

7.   The color image pickup apparatus according to claim
5, wherein said storage means comprises EEPROM.

8.   A color image pickup device comprising:
      a pixel group placed in an array of a plurality of
pixels of photoelectric conversion elements; and
      a color coding array corresponding to the pixel
group, arrayed in a randomized array satisfying
predetermined array restricting conditions.

9.   The color image pickup device according to claim 8,
wherein said color coding array comprises a color filter.

10.   The color image pickup device according to claim 8,
wherein said array restricting conditions are minimum

density conditions concerning colors.

11.   A color image pickup apparatus comprising:

a color image pickup device having a pixel group

placed in an array of a plurality of pixels of

photoelectric conversion elements and a color coding array

corresponding to the pixel group, arrayed in a randomized

array satisfying predetermined array restricting

conditions; and

color separation means for performing color

separation processing of output signals of the color image

pickup device in accordance with the random color coding

array of the color image pickup device.

12.   The color image pickup apparatus according to claim

11, wherein said color coding array comprises a color

filter.

13.   A color image pickup apparatus comprising:

a color image pickup device having a pixel group

placed in an array of a plurality of pixels of

photoelectric conversion elements and a color coding array

corresponding to the pixel group, arrayed in a randomized

array satisfying minimum density conditions concerning

colors; and

color separation means for performing color separation processing of output signals of the color image pickup device in accordance with the random color coding array of the color image pickup device.

14.   The color image pickup apparatus according to claim 13, wherein said color coding array comprises a color filter.

15.   The color image pickup apparatus according to claim 11 further comprising storage means for storing array data concerning the random color coding array of said color image pickup device, for performing color separation processing at said color separation means.

16.   The color image pickup apparatus according to claim 13 further comprising storage means for storing array data concerning the random color coding array of said color image pickup device, for performing color separation processing at said color separation means.

17.   The color image pickup apparatus according to claim 15, wherein said storage means comprises mask ROM.

18..   The color image pickup apparatus according to claim

16, wherein said storage means comprises mask ROM.

19.   The color image pickup apparatus according to claim
15, wherein said storage means comprises EEPROM.

20.   The color image pickup apparatus according to claim
16, wherein said storage means comprises EEPROM.

21.   A color image pickup device comprising:
        a pixel group placed in an array of a plurality of
pixels of photoelectric conversion elements; and
        a color coding array corresponding to the pixel
group, arrayed in a randomized array satisfying
predetermined color distributing conditions.

22.   The color image pickup device according to claim 21,
wherein said color coding array comprises a color filter.

23.   A color image pickup apparatus comprising:
        a color image pickup device having a pixel group
placed in an array of a plurality of pixels of
photoelectric conversion elements and a color coding array
corresponding to the pixel group, arrayed in a randomized
array satisfying predetermined color distributing
conditions; and

color separation means for performing color separation processing of output signals of the color image pickup device in accordance with the random color coding array of the color image pickup device.

24.   The color image pickup apparatus according to claim 23, wherein said color coding array comprises a color filter.

25.   The color image pickup apparatus according to claim 23 further comprising storage means for storing array data concerning the random color coding array of said color image pickup device, for performing color separation processing at said color separation means.

26.   The color image pickup apparatus according to claim 25, wherein said storage means comprises mask ROM.

27.   The color image pickup apparatus according to claim 25, wherein said storage means comprises EEPROM.

28.   A color image pickup apparatus comprising:
    a color image pickup device having a pixel group placed in an array of a plurality of pixels of photoelectric conversion elements and a color coding array

corresponding to the pixel group, arranged in a randomized array;

storage means for storing array data concerning the color coding array and pixel defect data of the color image pickup device; and

color separation means for generating color signals in accordance with the color coding array data stored in the storage means,

wherein said color separation means performing a predetermined pixel defect correction in the color signal generating process based on the pixel defect data stored in said storage means.

29. The color image pickup apparatus according to claim 28, wherein said color coding array comprises a color filter.

30. The color image pickup apparatus according to claim 28, wherein the predetermined pixel defect correction processing by said color separation means comprises processing where an output signal of a fault pixel is supplemented by using an output signal of the pixel nearest to the fault pixel among the pixels of the same color as the color of signal to be supplemented for the fault pixel.

31.   The color image pickup apparatus according to claim
28, wherein said storage means comprises EEPROM.

32.   The color image pickup apparatus according to claim
30, wherein said storage means comprises EEPROM.